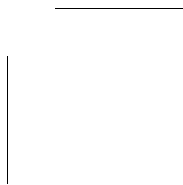
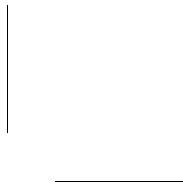


USER'S GUIDE



CARDWIZARD FOR WINDOWS NT



▼▼▼▼ CardWizard for Windows NT

User's Guide

Copyright

© 1998 SystemSoft Corporation. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form, or by any means, electronic, mechanical, optical, chemical, manual, or otherwise, without the prior written approval of SystemSoft Corporation, One Innovation Drive, Natick Massachusetts 01760.

Trademarks

SystemSoft is a registered trademark and CardWizard and Power Profiler are trademarks of Systemsoft Corporation.

Windows and Windows 95 are registered trademarks and Windows NT is a trademark of Microsoft Corporation in the U.S. and other countries used under license.

PCMCIA is a trademark of PCMCIA Corporation.

Disclaimer

SystemSoft Corporation provides this document and the programs "as is" without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose.

This document could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in future revisions of this document. SystemSoft Corporation is under no obligation to notify any person of the changes.

▼▼▼▼ Contents

1 CardWizard for Windows NT

What is CardWizard for Windows NT 1-2

What CardWizard for Windows NT Can Do for You 1-3

2 CardWizard for Windows NT Installation

Installing CardWizard for Windows NT 2-1

Uninstalling CardWizard for Windows NT 2-6

Reinstalling CardWizard for Windows NT 2-8

3 CardWizard for Windows NT Features

Features 3-2

The Menu Bar 3-4

Selected Menu Items in Depth 3-6

Power Management Support 3-25

Power Suspension 3-25

4 Hints for Using CardWizard for Windows NT

Card Recognized but not Configured 4-1

Card Configured 4-2

Card Recognized and Configured but Doesn't Work 4-2

Suspend Notifications 4-3

5 Formatting PC Cards

Formatting ATA Hard Disk or ATA Flash Disk Cards 5-2

Formatting an ATA PC Card from Windows NT Using
the Start Button Icon 5-2

Formatting an ATA PC Card from Windows NT Using
My Computer Icon 5-4

CardWizard for Windows NT User's Guide

Formatting Memory (SRAM or Flash) PC Cards 5-4

How to Configure Network Cards B-1

How to Install CardWizard for Windows NT and
PowerProfiler for Windows NT C-1

▼▼▼▼1

CardWizard for Windows NT

In this Chapter

- *What is CardWizard for Windows NT* 1-2
- *What CardWizard for Windows NT Can Do for You* 1-3

SystemSoft's CardWizard for Windows NT enables you to use PC Cards easily. The user interface provides a graphical view of all PC Card slots in your computer and the advanced diagnostic capabilities assist you in configuring PC Cards.

Additional features enable you to customize your environment. These include the ability to launch applications when cards are inserted.

What is CardWizard for Windows NT

CardWizard for Windows NT aids the configuration of PC Cards by automatically diagnosing and resolving common PC Card problems.

CardWizard features a PC Card expert system that addresses advanced configuration issues. Insert a new PC Card in a PC Card slot and the Wizard pops up a graphical representation of the slots and information it gathers about the new card. If there are any problems, click on **Wizard** and you can automatically fix the problem. Problems like incorrect or missing PC Card drivers, system resource conflicts (IRQ, Memory, or I/O ports) unconfigured Network and ATA cards, as well as memory conflicts will be resolved.

In addition, CardWizard works with *PowerProfiler*, SystemSoft's premier power management solution, and other third-party power management systems. PowerProfiler combines highly integrated system-level software with a simple-to-use graphical interface that delivers unmatched power management capabilities for notebook PCs running Microsoft Windows NT (4.0) operating system.

SystemSoft's *PowerProfile*™ *for Windows NT* may be bundled with your CardWizard for Windows NT product. If these products are bundled, you can install both products at once by following the Integrated Installation procedure described in Appendix C of this user's guide.

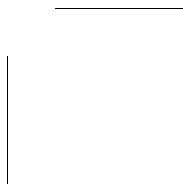
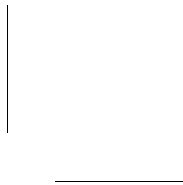
What CardWizard for Windows NT Can Do for You

The CardWizard for Windows NT package extends the PC Card support for Windows NT in many ways:

- 1** Provides support for cards using existing Windows NT drivers.
- 2** Provides the ability to Hot-Swap Mass Storage (ATA, Flash, SRAM), Network, Combos and Modem PC Cards.
- 3** Supports 16-bit and CardBus PC Cards.
- 4** Boot-time Support for SCSI and specialty PC Cards (nontraditional cards which require their own drivers).
- 5** Configures PC Cards automatically.
- 6** Minimizes user intervention in configuring many PC Cards.
- 7** Provides extensive power management support for PC Cards including the ability to enable/disable PC Card slots.
- 8** Provides extensive Wizard diagnostics, providing the user with information about existing problems as well as the ability to automatically correct problems.

CardWizard for Windows NT is easy to use. It lets you view information about PC Cards and your computer's PC Card slot(s) with a Graphical User Interface (GUI) with features such as automatic program launch, Start/Stop functions and Card Configuration capabilities.





....2

CardWizard for Windows NT Installation

In this Chapter

- *Installing CardWizard for Windows NT* 2-1
- *Uninstalling CardWizard for Windows NT* 2-6
- *Reinstalling CardWizard for Windows NT* 2-8

Installing CardWizard for Windows NT

Installing CardWizard for Windows NT is a simple task. Just insert the diskette into the appropriate drive and follow the prompts on the screen. If you need assistance, refer to the instructions below:

- 1** If you have any PC Cards currently installed in PC Card slots, remove them.
- 2** If your system is connected to a network, log off before starting the installation.
- 3** Logon as an Administrator.
- 4** Insert the diskette in the drive.

CardWizard for Windows NT User's Guide

- 5 Carefully read the ReadMe file on the installation diskette.
- 6 Select **Run** from the Windows NT Start button.
- 7 Enter **a:setup** on the Open line in the Run dialog box.
- 8 Select **OK**.



Note: This release of CardWizard for Windows NT also supports an Integrated Installation program which is described in Appendix C.

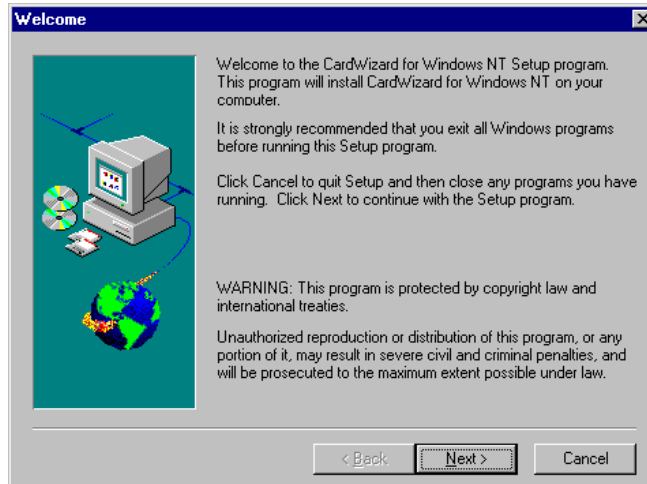
The installation program starts and indicates that Setup is preparing for the installation. You will then be guided through the installation process.

The first screen that displays is the CardWizard for Windows NT Setup screen shown below.



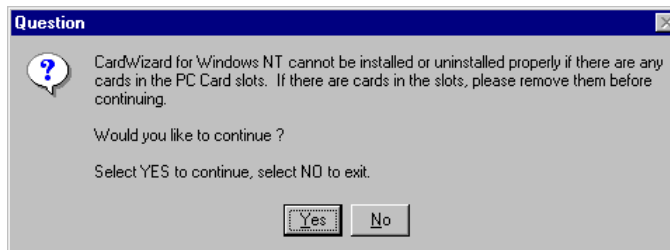
CardWizard for Windows NT Installation

- 9 Select the **Next** button to display the following Welcome screen.

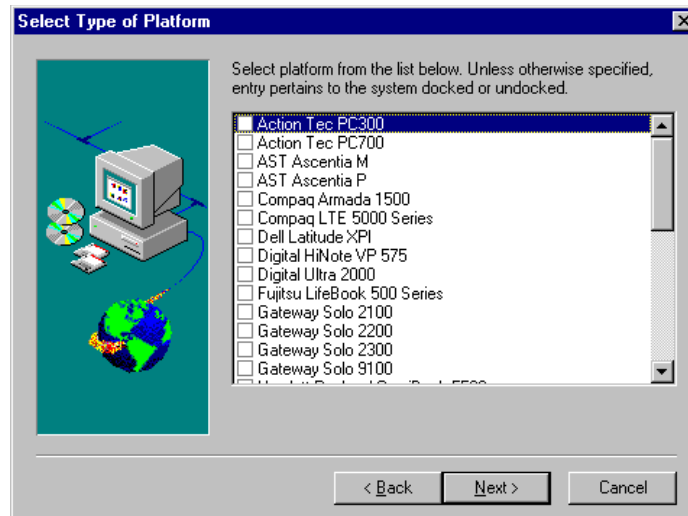


If Setup detects a previous installation of CardWizard for Windows NT, it will remove the previous installation and direct you to reboot the system. See page 2-6 for additional information.

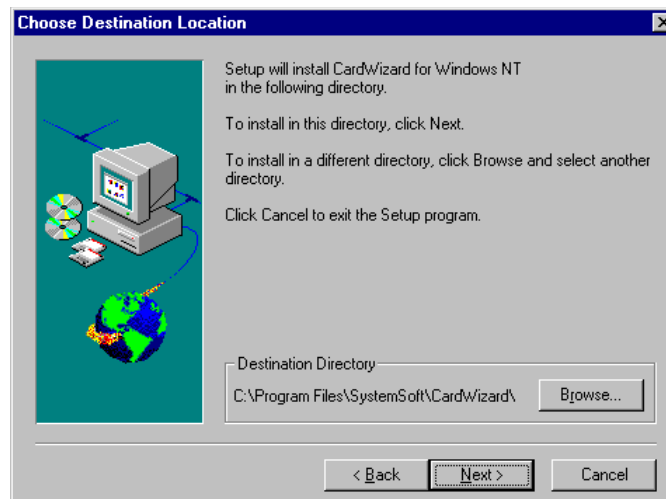
- 10 The following warning screen displays on your PC. Remove any inserted PC Cards.



- 11 In some cases, a screen displaying several computer platforms displays (see below). Select the correct computer from this list. If your system does not appear in the list, select **Other**.



- 12 Select the **Next** button to display the following Choose Destination Location screen.



- 13 Select **Next** to install the software in the default destination directory or select **Browse** to install the software into another directory. If **Browse** is selected, scroll through the folders and select the desired

directory. Once the destination directory has been selected, select **Next** to start decompressing and copying the files.

Three different information gauges (upper section of the graphic below) provide you with important feedback during installation.

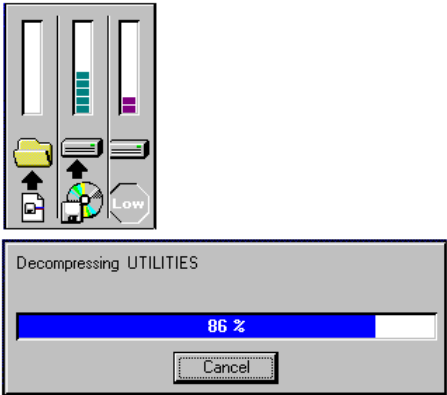


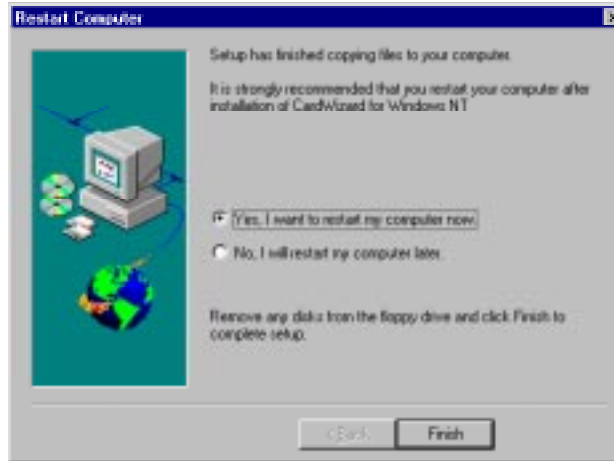
Table 2-1 describes the information gauges.

Table 2-1. Information Gauges

Gauge Location	Description
Left	Indicates the percent of each file
Center	Indicates the amount of the diskette that has been transferred to the hard disk.
Right	Indicates space available on the hard disk - a low sign indicates the hard drive has 5% or less space available.

The lower section of the previous graphic indicates how much of the currently compressed file has been decompressed and copied to the hard drive. This example indicates 86% of the hard drive is full.

After all files have been copied, the following screen displays.



- 14** Before you can run CardWizard for Windows NT, you must restart the computer. Choose **Yes** to restart.

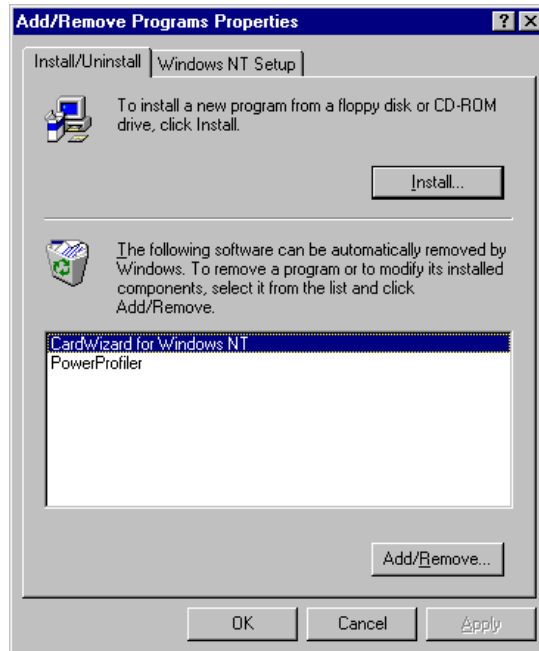
Uninstalling CardWizard for Windows NT

You can uninstall CardWizard from either the Control Panel or the Start menu item.

To uninstall this version of CardWizard from the Control Panel:

- 1** Login as an Administrator.
- 2** Select **Settings** from the Windows Start button.
- 3** Select the **Control Panel**.
- 4** Select the **Add/Remove** icon to display the Add/Remove Program Properties window (see the following sample screen).

CardWizard for Windows NT Installation

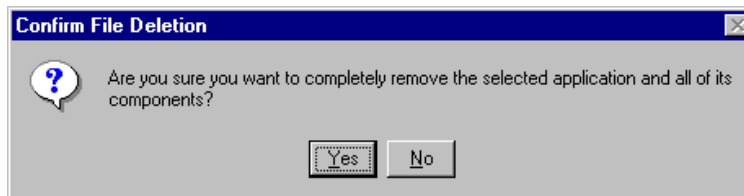


- 5 Select the **CardWizard for Windows NT** name, then click on the **Add/Remove** button.
- 6 A dialog box appears asking if you want to completely remove CardWizard and all of its components.
- 7 Select **Yes** to start the removal process
- 8 From the Add/Remove Program Properties window, select **OK** to close the window.
- 9 The system will automatically reboot with CardWizard for Windows NT successfully uninstalled.

To uninstall this version of CardWizard from the Start menu select the following:

Programs > CardWizard for Windows NT > CardWizard for Windows NT Uninstallation

The following dialog box displays:

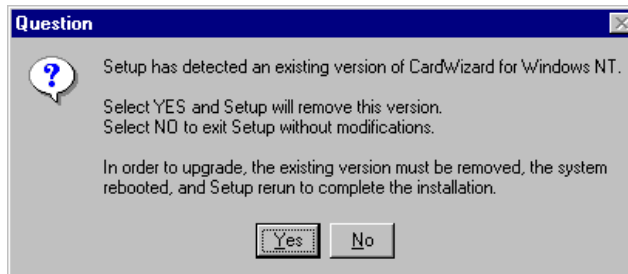


Select **Yes** to remove CardWizard.

Reinstalling CardWizard for Windows NT

If you need to reinstall the program, repeat the installation steps which appear previously in this Chapter. From the Start menu, the Explorer, or from a command prompt, run **setup.exe** on the installation diskette.

The Setup procedure will detect that you have an active configuration and will ask you whether you want to proceed. If you select **Yes**; Setup will disable the drivers and the Wizard will instruct you to reboot. (See below.)



CardWizard for Windows NT Installation

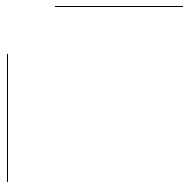
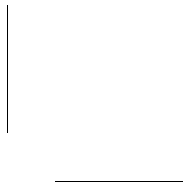
The installation program provides a cleanup feature which runs automatically during the installation procedure. If you select **Yes**, the following dialog box displays:



Select **Yes** to restart the system.

After you have rebooted you can run the installation procedure again.





...3

CardWizard for Windows NT Features

In this Chapter

➤ <i>Features</i>	3-2
➤ <i>The Menu Bar</i>	3-4
<i>Selected Menu Items in Depth</i>	3-6
➤ <i>Power Management Support</i>	3-25
<i>Power Suspension</i>	3-25

This section specifies the features and functions (menu by menu presentation) of CardWizard for Windows NT.

Once the installation is complete, you can begin using your PC Cards in Windows NT. While your CardWizard for Windows NT application includes a comprehensive Help system, this section describes many of the practical CardWizard features and provides additional hints for CardWizard use.

CardWizard for Windows NT supports Hot-Swapping of ATA, SRAM and Flash PC Cards, Fax/Modem PC Cards, Network PC Cards, and Combo PC Cards. Specialty and SCSI PC Cards are also hot insertable. However, some devices need to be available at boot to work, therefore we recommend that SCSI PC Cards be inserted at boot.

This release of CardWizard for Windows NT supports CardBus Cards.

Features

CardWizard for Windows NT supports a variety of features. Table 3-1 provides a description of the features supported in this release.

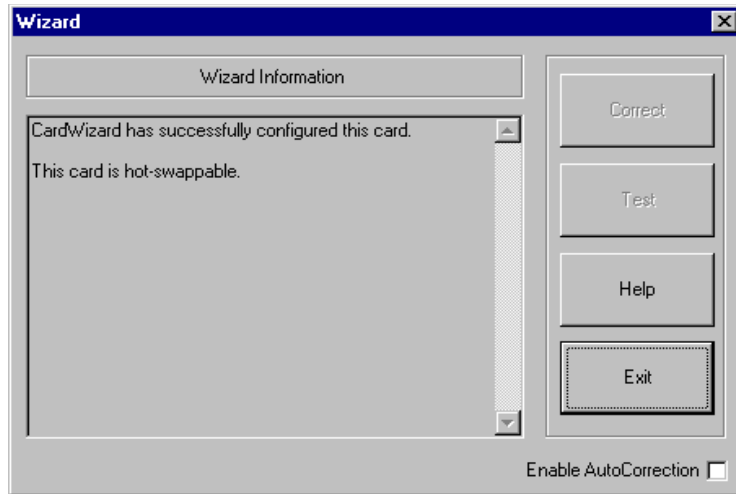
Table 3-1. CardWizard for Windows NT Features

Feature	Description
Hot-Swapping	<p>Includes Hot-Swapping of Mass Storage (ATA, Flash and SRAM) PC Cards, Network PC Cards, and Modem PC Cards. To determine if a card supports Hot-Swapping, select the Wizard button after you have configured the card.</p> <p>If the card is Hot-Swappable, a screen displays indicating that the card has been successfully configured and is Hot-Swappable. (See the sample screen at the end of this table.)</p>
Specialty Card Support	<p>Specialty cards are PC Cards other than traditional PC Cards - and have their own drivers. Specialty cards also include "Combo" Cards which combine a Modem function with a nonnetwork function.</p>
Power Management	<p>Allows you to power down (then power back to the same state) the entire machine, including the PC Card controller, the slots, and any PC Cards.</p>
Problem Resolution	<p>Helps you to configure the PC Card. You can enable AutoCorrection of problems to reduce or prevent the screen messages from displaying.</p>
Card Information Displays	<p>Provides a graphical view of all attached PC Card devices. It also provides easy access to PC Card settings, configuration items and user selected options.</p>

CardWizard for Windows NT Features

Table 3-1. CardWizard for Windows NT Features

Feature	Description
Stop/Start a Card	You must stop a mass storage PC Card before removing it. This feature prepares a Mass Storage PC Card for clean removal.
Card Properties	Provides additional information about a specific PC Card.
Formatting Memory PC Card	Use the FAT file system to format Memory (Flash and SRAM) Cards. You can set a default drive letter which will be used the next time a Memory PC Card is inserted.
User Settings for Modem /Serial Cards	Allows you to set the preferred order for assigning COM ports.
Options for Launching Applications	Allows you to automatically launch a particular application on card insertion. This eliminates the need to start the application manually.
Sound Options	Allows you to associate Sound files with PC Card insertion, removal, and Power Management events. You can associate sounds for up to five distinct events or mute sounds.
Event Notifications	Controls the display of card removal and insertion dialog boxes.
Card View Escape Options	Select different methods for viewing (numbering and naming) the PC Card devices.
Hot-Swap Test	Determines if you can safely remove a Network PC Card and reinsert it into a slot. See page 3-20 for additional information on this feature.



The Menu Bar

The CardWizard for Windows NT application has a single Menu Bar (see below) containing File, View, Action, Options and Help items.



The Menu Bar is organized to allow you to easily select different views of the application, perform actions against cards, modify options, and to obtain help.

Table 3-2 contains a brief description of each option on the Menu Bar. For more detail on these options, see the information on the following pages.

Table 3-2. Menu Bar Options

Menu Option	Description
File	Contains Exit option which enables you to exit the CardWizard for Windows NT application.
View	Toggles the display of the Toolbar and the Status Bar.
Actions	Allows you to use the Wizard, stop a PC Card, display PC Card properties, enable/disable PC Card Slots, and format Memory PC Cards (Flash and SRAM Cards).
Options	Allows you to change card settings, to specify the names and the arrangement of slots, to setup how messages appear, to associate sounds with events (card insertion, removal, and power management), and to automatically launch applications on card insertion.
Help	View the Help Contents, access Help on using Help, display the Topics contained within Help, the ReadMe file, and information about the CardWizard for Windows NT.

Selected Menu Items in Depth

The following information provides more details about each specific menu item.

Actions Menu

You can access the following features by pressing the right mouse button (from the Card Information screen) or by selecting a particular item from the Actions menu.

- **Wizard** - If you are experiencing a problem configuring your PC Card, select the PC Card in question (to activate the Wizard button for that card) then select the **Wizard** button in the Card Information window (from the Action menu, or by using the right mouse button).



CardWizard for Windows NT then analyzes the computer to verify resources are available for PC Card configuration.

Click on the **Wizard** button to fix most PC Card problems. Even if the Wizard cannot automatically resolve a problem, it can pinpoint the problem so that you or a technical support engineer can fix the problem more easily.

- **Start** - Restarts a stopped PC Card.
- **Stop** - Turns off power to a slot when a card (in that slot) is stopped. Except for Network PC Cards, Stop frees resources used by a PC Card.

■



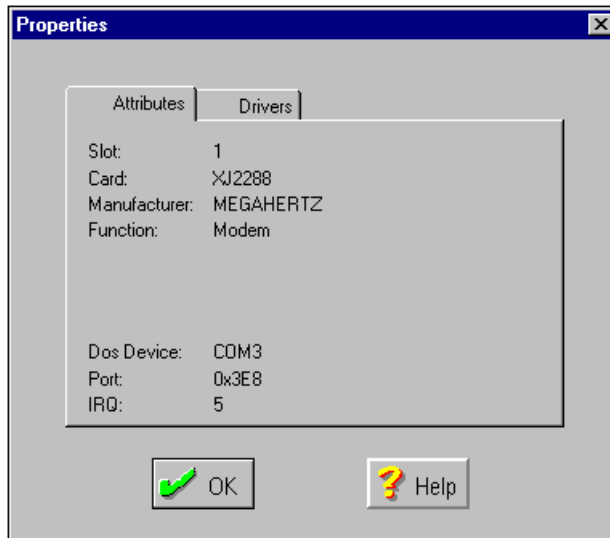
To stop a PC Card, click on the traffic light on the ToolBar, use the right mouse button (and select **Stop**), or select **Stop** from the Actions menu.

If the card is stopped, the PC Card information screen displays a red stop sign. Once a card has been stopped, the traffic light (in the ToolBar) for this card, turns from red to green indicating the card is ready to be started.

Power is turned off to the slot when a card in that slot is stopped and it no longer drains power. You must stop Mass Storage PC Cards before you remove them. Failure to do so may result in unpredictable behavior and/or loss of data.

- **Properties** - Displays information about the attributes and drivers that are loaded for a PC Card. CardWizard for Windows NT extracts important information from the PC Card software drivers and lists it here in easy-to-read displays, providing a centralized location for all PC Card information.

- **Attributes tab**- displays the following screen for the inserted card:



Slot- Indicates the slot this PC Card is currently occupying

Card - Type of PC Card

Manufacturer- Card manufacturer name

Function - Function, for example, Modem, ATA, Flash, SRAM, Network etc.

Capacity - Disk capacity for Memory PC Cards (Flash and SRAM cards)

File System - File system for Mass Storage PC Cards (ATA, Flash, and SRAM cards)

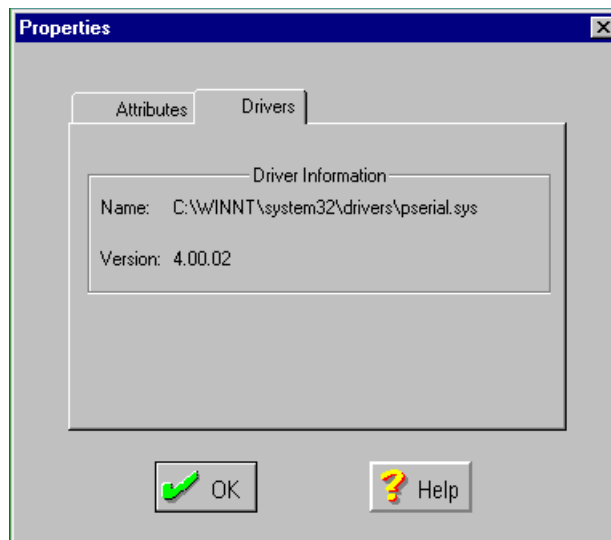
Volume Label - Disk volume for Mass Storage PC Cards (ATA, Flash, and SRAM cards)

DOS Device - COM port or the drive letter this device uses

Port - I/O address associated with this device

IRQ - Interrupt this device uses

- **Drivers tab**- Displays the following menu:



Name - Indicates the full path to the driver for this PC Card

Version - Indicates the version for the current driver

- **Enable** - Allows you to restore power to the currently highlighted PC Card Slot. You can only enable a slot if it has previously been disabled.
- **Disable** - Allows you to remove power from the currently highlighted PC Card slot reducing the drain on the battery.



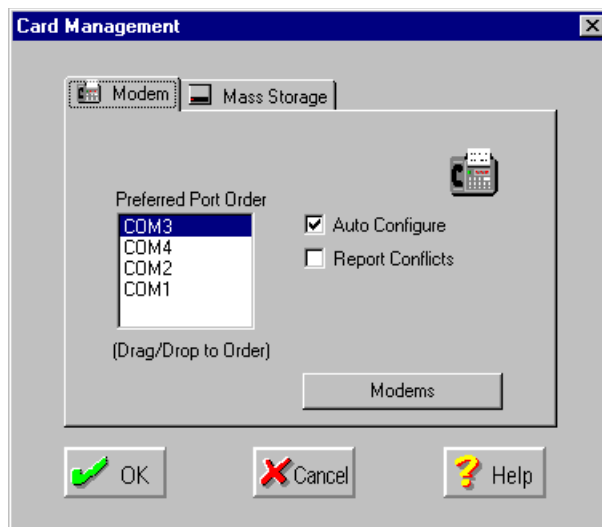
Note: .This slot remains disabled even after you have rebooted the system. During the period the slot is disabled, you can use it as a storage location for any PC Card.

- **Format** - Allows you to format the currently highlighted PC Memory (SRAM or Flash) Card. For additional information on using Format, see Chapter 5.

Options Menu

You can access the following menu items from the Options menu: Card Management, Slot Management, Notify, Sounds, and Launch.

- **Card Management** - Allows you to specify both Modem and Mass Storage settings.
 - **Modem Tab** - displays the following menu:

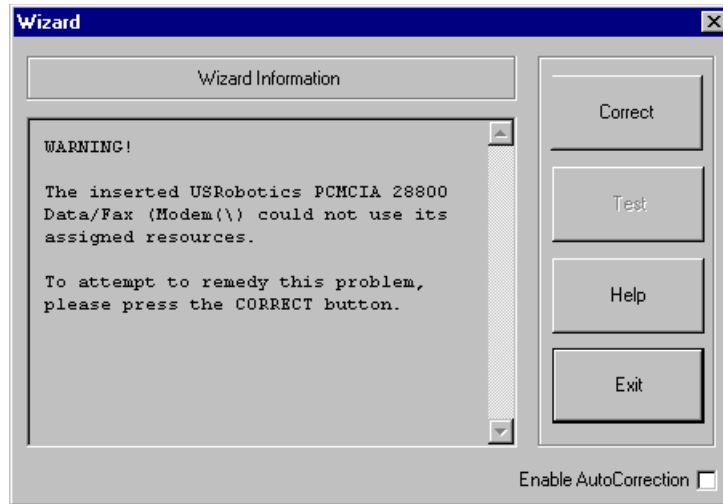


Preferred Port Order - Allows you to change the order in which the Wizard will attempt to assign the COM ports to modem PC Cards. For instance, in the example, CardWizard will first attempt to assign COM 3 to a newly inserted modem. If it is not available, Card Wizard will try COM 4, etc.

Auto Configure checkbox - If checked, the Wizard will automatically configure modem cards based on available resources. Subsequently, it will remember the setting last successfully used to configure a modem in each slot. This "remembered" port will be used first when a modem is inserted, overriding the preferred order.

CardWizard for Windows NT Features

If the Auto Configure checkbox is not checked, a Wizard dialog box (see below) will appear each time a modem PC Card is inserted.



If the Auto Configure box is checked and there is a resource conflict, the Wizard dialog box (above) will also appear.

Report Conflicts checkbox - Will be disabled unless the Auto Configure checkbox is checked. If both Preferred Port Order and Report Conflicts are set, the Wizard will send a message if it cannot use the "last used" settings because of an existing conflict.

Modems - Provides all information about modems in a single location. By selecting the **Modem** button, you can invoke the Microsoft Windows NT Modem Control Panel applet and see the modems that are installed. Note that, if you need to install a new modem, we recommend that you leave "Don't detect my modem; I will select it from a list" (in the Install New Modem dialog box) unchecked so that NT will attempt to detect the modem.

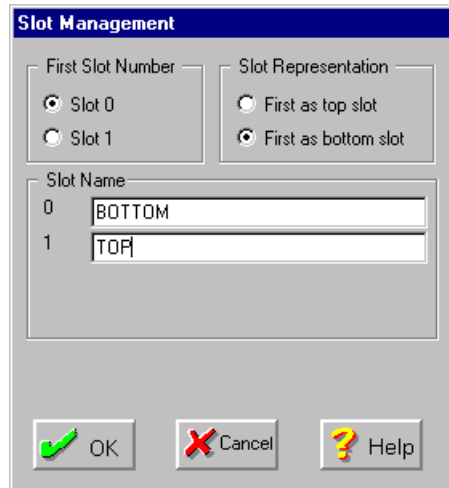


Note: .In cases where your system already has a bin modem and you are inserting a PC Card Modem, the modem applet may not correctly autodetect the second PC Card Modem. In this case you must select from the list of supported modems.

- **Mass Storage tab** - (See sample screen below.) Allows you to set the default drive letter that will be used the next time a Mass Storage (ATA, Flash, or SRAM) PC Card is inserted.



- **Slot Management** - From this screen you can control the choice of First Slot Number (either 0 or 1) , designate the First Slot as either the top or the bottom slot, and provide slot names. (See the following menu.)

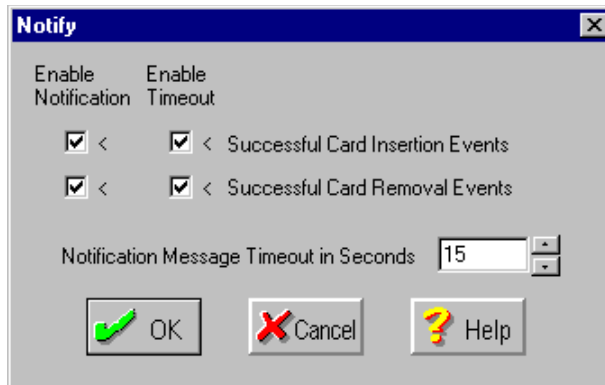


First Slot Number - Lets you decide whether CardWizard should refer to your first slot as slot 0 or slot 1. If you choose to call the first slot "Slot 0" and your computer has two PC Card slots, the first slot will be called slot 0 and the second will be called slot 1. The default First Slot Number is *Slot 0*. Any changes will take effect once you have pressed the **OK** button.

Slot Representation - CardWizard displays your system's PC Card slots one on top of the other. CardWizard lets you decide whether you want the top slot to be your first slot or the bottom slot to be your first slot. The default Slot Representation setting is "*First as bottom slot*". Any changes will take effect once you have pressed the **OK** button.

Slot Names - CardWizard optionally allows you to assign a name for each PC Card slot. Any changes will take effect once you have pressed the **OK** button. For example, in the screen above, Slots 0 and 1 have been named "BOTTOM" and "TOP" respectively.

- **Notify** - Provides information on Enabling Messages and on User Message Confirmation. You can use this information to control the display card insertion and removal dialogs.



Successful Card Insertion Events: Allows you to select whether a message should pop-up when you insert a PC Card and it gets configured. When a checkmark is showing in the checkbox, a message will pop-up each time a card is inserted displaying the name of the card and a graphical representation of the card type. To toggle this message option, simply click once in the **Enable Notification** box at left.

Successful Card Removal Events: Allows you to select whether a message should pop-up each time a card is removed. When a checkmark is showing in the check box, a message will appear each time a card is removed from any of the PC Card slots in your computer. To toggle removal message, simply click once in the option box at the left. The change will take effect once you have pressed the **OK** button.

Some possible unsuccessful Card Removal Events which would automatically be displayed include:

- Removing an ATA or Memory Card (SRAM or Flash Card) without first stopping it
- Removing a non Hot-Swappable Network PC Card
- Removing a SCSI PC Card

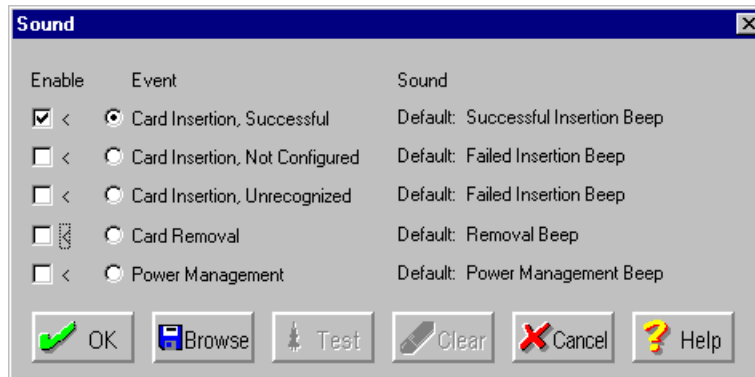
Notification Message Timeout in Seconds: CardWizard insertion and removal messages can be configured to automatically disappear after a set time interval. This option allows you to set the duration of all displayed messages. Simply point or click on either the up or down arrow to increase or decrease the duration in seconds of all displayed messages. This change will take effect once you have pressed the **OK** button.

Note that when the Power Management system attempts to Suspend the system, the Wizard will automatically display information about cards in the system. You cannot suppress these messages.



Note: If you have not checked the Enable Timeout box, notification messages will remain visible until you clear them. If you have checked the Enable Timeout box, Power Management events will be timed out. (The default duration is 15 seconds and the maximum duration is 50 seconds.)

- **Sound** - The Sound screen (see the following sample screen) allows you to associate sounds (.WAV files or beeps) with PC Card insertion and removal events. Note that CardWizard automatically grays out the Sound menu option if you do not have a sound system installed.



You can associate sounds with the following:

- **Card Insertion, Successful:** The PC Card has been inserted into a slot and correctly recognized and configured by Card Services.
- **Card Insertion, Not Configured:** The PC Card has been inserted and recognized; i.e., there is a resource conflict or a lack of resources, etc.
- **Card Insertion, Unrecognized:** The PC Card has been inserted, but not recognized.
- **Card Removal:** The PC Card has been removed from a slot.
- **Power Management:** A Power Management event has occurred.

To associate a sound file with an event follow these steps:

- 1** Click on the **Browse** button and select a sound file (.WAV file) for the event you have chosen. This lets you browse for the desired sound file. Once you have selected a file, a Sound Files Selection dialog box will appear.
- 2** Click on the **Test** button to listen to the beep or sound (.WAV file) before enabling it. You can test either the existing (current) file, if one is already present, or the new file which you have just selected. Click on the **OK** button to accept the newly selected file.
- 3** Click in the **Enable** box to activate the sound card the next time the event occurs. If the Enable box is not selected or if a sound card is not present and Event is selected, the default beep will occur (for this event) using the system's speaker.
- 4** Click on the **OK** button to accept the settings and exit.

This dialog box contains the following items. These items will be highlighted and available for selection only if they are applicable.

- **Enable:** Allows you to activate and deactivate PC Card sound events. A checkmark indicates that the sound file appearing on the right will play when the associated event occurs.
- **Card Events:** Allows you to associate sounds for up to five distinct events (described earlier).

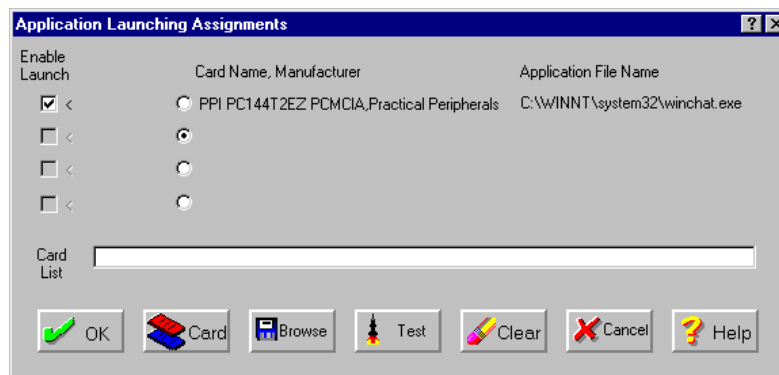
CardWizard for Windows NT Features

- **Sound:** Once you have chosen a sound (.WAV) file using the Browse option, the name and location of the sound file will appear next to the event under the "Sound File Heading". If the address of the sound file is long, CardWizard will abbreviate the address so the most crucial information is displayed. Once you have selected a file, a Sound Files Selection dialog box will appear. Click on the **Test** button to listen to the sound (.WAV file) before enabling it. You can test either the existing (current) file, if one is already present, or the new file which you have just selected. Click on the **OK** button to accept the newly selected file. Use a sound file which is smaller than 180 KBytes.
- **Browse Button** - Provides access to files on any of the drives available to you. Choose a file that has a .WAV extension (a sound file) then select **OK**.
- **Test Button** - To listen to a sound (.WAV) file click on the **Test** button.



Note: CardWizard for Windows NT automatically grays out the Sound menu options if you do not have a sound card installed.

- **Clear Button** - Click on the **Clear** button to erase an entire line. Only the highlighted line will be cleared.
- **Launch** - Allows you to associate applications with PC Cards so that an application will automatically launch when you insert the associated PC Card. See the following sample screen.





Note: CardWizard for Windows NT will only launch an application when the associated PC Card is configured. In addition, as launching is associated with the current user, launching is only possible with PC Cards which are inserted after the system has booted and the user has logged on.

Follow these steps to associate an application with a PC Card for auto-launch:

- 1** Highlight a card in the Card List box by clicking on it.
- 2** Click on the **Card** button. The card's name and manufacturer information will be displayed below the "Card Name, Manufacturer" heading.
- 3** Click on the **Browse** button and select an application to be launched for the card you have selected. The application name and location will appear below the "Application File Name" heading.
- 4** Click on the **Test** button to verify that you have chosen the right application and that it launches properly.
- 5** Click inside the Enable box to activate auto-launch the next time the card is inserted.
- 6** Click on the **OK** button to accept the settings and exit.

The application will then automatically launch when this PC Card is inserted.

The following items appear in this dialog box. These items will be highlighted and available for selection only if they are applicable.

- **Enable Launch** - Allows you to activate or deactivate application auto-launching for PC Card insertions. A checkmark indicates that the application appearing on the right will be launched each time the associated PC Card is successfully inserted and configured.
- **The Card Name, Manufacturer** - Displays the identity of the card which will have an application associated with it.

CardWizard for Windows NT Features

- **Application File Name** - Once you have chosen a launch application using the Browse option, the name and location of the application will appear next to the associated card under the Application File Name Heading. If the address of the application is long, CardWizard will abbreviate the address and display only the most crucial information.
- **Card List Box** -Contains the names of all PC Cards that are currently installed in your machine. If you remove or insert a card while in the Launch dialog box, this box will be updated automatically.
- **OK Button** - Accept the current application launching assignments which appear in this dialog box.
- **Card Button** - If you have highlighted a card in the Card List box, clicking on the Card Button will place the card beneath the Card Name, Manufacturer heading so you can associate an application with it.
- **Browse Button** - Provides access to files on any of the drives available to you. Select an application and choose OK to select it. The application name will appear to the right of the associated card beneath the Application File Name heading.
- **Test Button** - Simulate an auto-launch by clicking on the Test button.
- **Clear Button** - Erases an entire line. Only the highlighted line will be cleared.
- **Cancel Button** - Closes this dialog box without making changes.

Help Menu

In addition, CardWizard for Windows NT offers online Help designed to make it easy for you to use this product with a minimum of effort. The Help menu has the following options:

- **Contents** - Select this menu item to bring up CardWizard Help.
- **Using Help** - Select this menu item for comprehensive instructions on using Microsoft Windows NT Help.
- **Help Topics** - Select this menu item to list all available CardWizard Help topics.

- **ReadMe** - Select this menu item to view the ReadMe file included with your *CardWizard for Windows NT* software.
- **About CardWizard** - Select this menu item to display the version, copyright, memory use, processors and hard disk information for *CardWizard for Windows NT*.

Quick Launch

Once you have installed CardWizard for Windows NT, you can Quick Start the application by clicking on the **CardWizard** icon in the System Tray on the TaskBar with the right mouse button.

This causes the CardWizard menu to appear on the TaskBar, to the left of the CardWizard icon. Clicking on this CardWizard menu once with the left mouse button launches the Wizard application.

Another way to launch the CardWizard for Windows NT application is to double-click on the System Tray icon with the left mouse button.

Hot-Swap Capability Test

Many Network PC Card drivers support Hot-Swapping. To determine if your Network PC Card supports Hot-Swapping, insert the card. The following screen displays:



CardWizard for Windows NT Features

Once your newly inserted network card appears, a Network icon displays indicating if the PC Card drivers support Hot-Swapping.

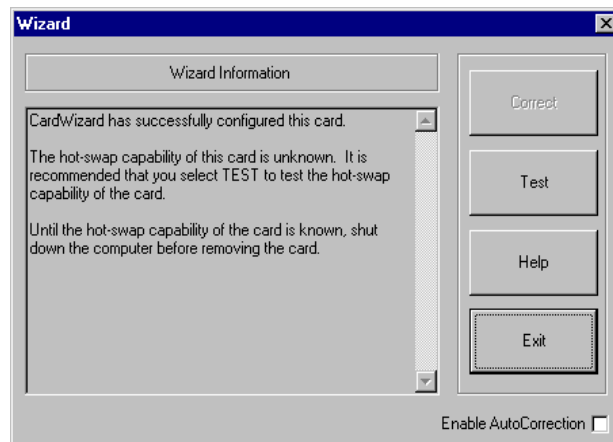
If the icon has a double arrow (see below), Hot-Swapping is supported.



If the icon has a one-sided arrow (see below), run the Hot-Swap test to determine if the PC Card drivers support Hot-Swapping.

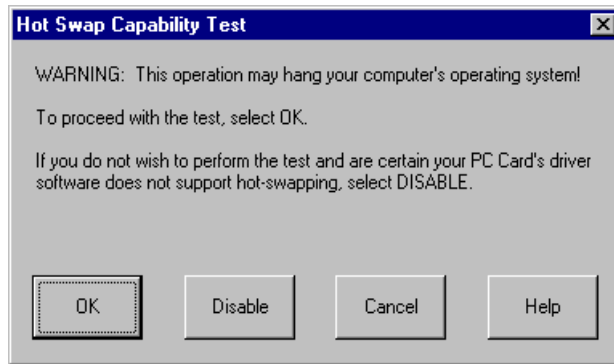


Select the **Wizard** Button (which will then be highlighted). You will see the Wizard screen. The Wizard will indicate that it is not sure whether the card is Hot-Swappable and it will recommend that you select **Test** to test for Hot-Swap capability.



Running the Test

Select **Test** and the following screen displays.:



As the Warning indicates, running this test on some cards may cause your system to freeze so you should save any work which is in progress before proceeding.

If your system freezes or your driver does not pass the test, contact your PC Card vendor for an updated driver. In addition, you can download an updated driver from the SystemSoft home page at: <http://www.systemsoft.com/>.

To run this test, select the **OK** button.

To disable the Hot-Swap capability, select the **Disable** button. Only use this button if you know that a card/driver is not Hot-Swappable and want to forego the test and just disable the functionality.

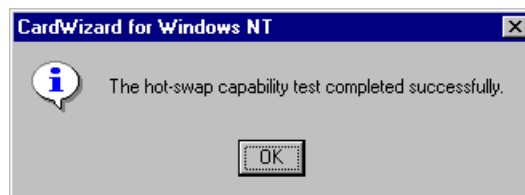
To exit the screen without running the test, select the **Cancel** button.

If the Wizard indicates that it is unsure whether your driver supports Hot-Swapping or if it was not Hot-Swappable, you can run the Hot-Swap test.

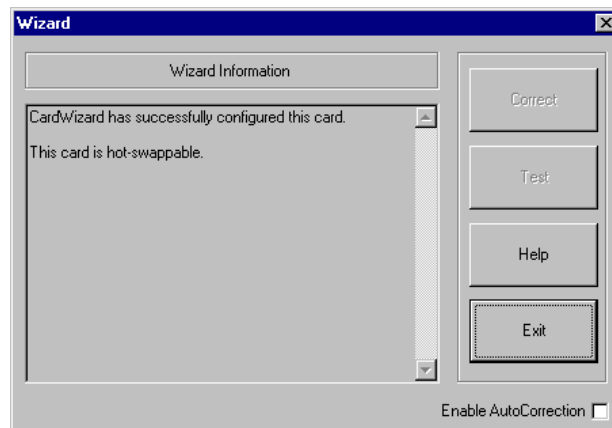
Possible Test Results

If you run the test, the following results are possible:

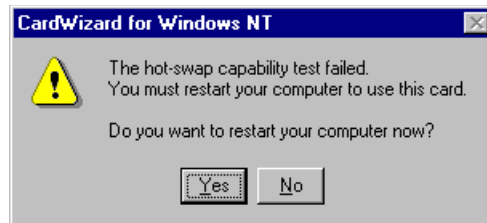
- 1 Your Network card drivers pass the test and are Hot-Swappable (see below).



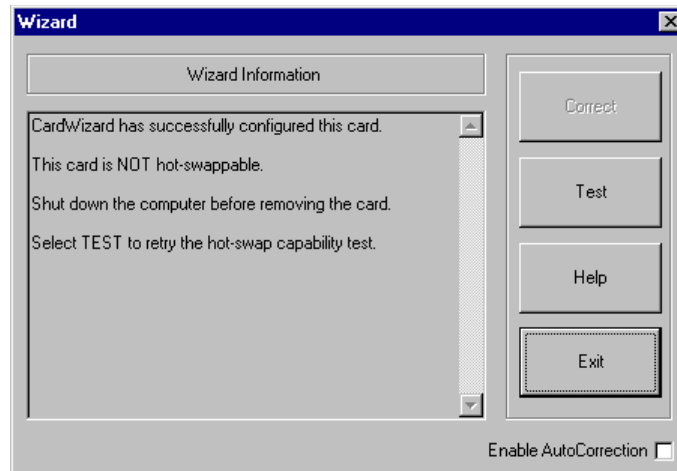
- 2 When you subsequently insert the card, the following screen displays:



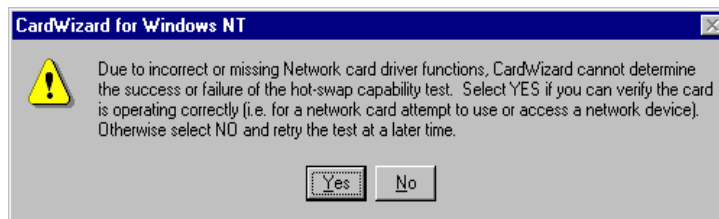
- 3 Your Network card drivers fail the test and are NOT Hot-Swappable (see below).



- 4 When you subsequently insert the card, the following screen displays:



- 5 During the test, your system freezes, indicating that your drivers are NOT Hot-Swappable.
- 6 You get a result indicating that it is uncertain whether your drivers are Hot-Swappable (see below).





Note: Once the test has been run, for subsequent insertions the Wizard screen indicates if the card is Hot-Swappable.

If you get an uncertain result, verify that the network is reachable. To do this, attempt to view the contents of a file which is stored on a network volume. If you can "see" the network, you should manually mark the card as Hot-Swappable by clicking **Yes**. If you cannot "see" the network, click **No** to mark the card as NOT Hot-Swappable.

Power Management Support

This release of CardWizard for Windows NT provides support for Power Management.

Power Management is used to conserve battery life on a laptop PC. Power is conserved by suspending the machine. When suspended, many devices are powered off and others run at low power consumption levels. When the machine is resumed (exits the Suspend state), it returns to the state that it was in before the Suspend occurred. Programs and data that were in use before the Suspend are restored to their original state. This is done using Power Management applications such as SystemSoft's PowerProfiler.

Power Suspension

A system can be suspended as a result of

- being idle for a specified amount of time
- the battery power level being below a critical low level
- the hardware suspend button (on your computer) being pressed
- a software suspend button within a Power Management application (such as PowerProfiler) being pressed

CardWizard assists the user in managing PC Card devices over a Suspend/Resume cycle. The PC Card Controller and the cards are powered off as part of a Suspend event. Each card type is handled differently, to prevent losing data or crashing the machine when powered off and then back on again. For example, all files must be closed on an ATA disk prior to suspend.

The CardWizard presents instructions to help you avoid potential problems. The user is expected to follow the instructions before allowing the Suspend to complete. In some cases, the Wizard will reject the Suspend event altogether.

Note that the system can also do a Critical Suspend where the system is automatically suspended by the system because the battery life is about to expire. In the case of a Critical Suspend, your system may not be able to fully resume to the same state that existed prior to the Suspend. On resume from Critical Suspend, CardWizard analyzes the set of cards that were in use at the time of the Suspend and presents the user with instructions for saving data and preventing system problems. The instructions may require that the user attach AC power and reboot the machine.

Suspend and Resume for Various Card Types

Table 3-3 indicates how CardWizard handles each card type over a Suspend/Resume cycle.

Table 3-3. Suspend/Resume

Card Type	Suspend Handling	Resume Handling	Resume after Critical Suspend
Modem	Suspension occurs (transparent to user.)	Card artificially removed/inserted with the same configuration.	Card artificially removed/inserted with the same configuration.
Network ¹	System rejects suspension.	Not applicable	CardWizard recommends a reboot.
Combo ¹	System rejects suspension.	Not applicable	CardWizard recommends a reboot.

CardWizard for Windows NT Features

Card Type	Suspend Handling	Resume Handling	Resume after Critical Suspend
Mass Storage (ATA, Flash, or SRAM)	If any files are open, the User is asked to close them. Logical disk drives connected to the Mass Storage Disk are dismounted.	Card artificially removed/inserted with the same configuration.	Card artificially removed/inserted with the same configuration. User will receive a warning that data may have been lost.
SCSI	System rejects suspension.	Not applicable	CardWizard recommends a reboot.
Specialty	System rejects suspension.	Not applicable	CardWizard recommends a reboot.
Other	User given opportunity to accept or reject the suspension.	Artificial insertion/removal of card. Third party client driver is responsible for any additional configuration.	CardWizard recommends a reboot.

¹ *CardWizard for Windows NT* supports Hot-Swapping on Network PC Cards and Combo PC Cards. If the drivers for a Network or Combo Card are Hot-Swappable, the Suspend/Resume handling is the same as it is for Modem Cards.

CardWizard for Windows NT User's Guide

From Table 3-3, note that if the user does not respond to a suspend dialog within the appropriate time (which is configured from the CardWizard Notify Options screen), the Wizard takes the following default actions:

- Hot-Swappable Network and Combo Cards as well as Modem and Mass Storage Cards accept Suspend.
- Non Hot-Swappable Network and Combo Cards as well as SCSI and other PC Cards reject the suspension.



...4

Hints for Using CardWizard for Windows NT

In this Chapter

- *Card Recognized but not Configured* 4-1
- *Card Configured* 4-2
- *Card Recognized and Configured but Doesn't Work* 4-2
- *Suspend Notifications* 4-3

The following information describes some of the interventions you can take to resolve PC Card problems.

Card Recognized but not Configured

CardWizard has two distinct ways of notifying you when a card is configured or not configured. If enabled, CardWizard sounds either a single beep or a double beep when you insert a card.

- A single beep indicates that your PC Card is not configured.
- A double beep indicates that your card is configured.

CardWizard also displays very clear messages about cards that are in the machine.

- If a card is configured CardWizard displays an icon representation of the inserted card and tells you the resources that have been assigned to it.
- An unconfigured card will cause the Wizard to appear with a message indicating that the card is "unknown". In addition, if you display properties for this card, a "Warning: Card is not configured" message appears.

If a message appears indicating that the card hasn't been configured, select the **Wizard** button and let CardWizard troubleshoot the problem. For Network and SCSI PC Cards you may need to install appropriate drivers. This may require that you have the Windows NT CD-ROM available to configure these card and administrative privileges.

Card Configured

You will hear a double beep to indicate that CardWizard has located system resources and allocated them to your card. You can now use your card as if it were any other peripheral device. To view the card's configuration, highlight the card, click **Actions**, then click **Properties**.

Card Recognized and Configured but Doesn't Work

If the Card is installed and configured yet does not work, you can implement the following courses of action:

- Modem Cards - ensure that all settings in the Microsoft Windows NT Modem Control Panel applet and in your communications application correspond and are correct.
- SCSI Cards- ensure that the proper driver for the SCSI card is installed.

SCSI PC Cards are hot insertable. Nevertheless, some devices need to be available at boot to work, therefore we recommend that SCSI PC Cards be plugged in and turned on at boot (especially when the card has already been installed and configured, yet does not work).

Note that some combinations of SCSI controllers and SCSI devices do not work together. The reason is that the SCSI specification does not specify which device, the SCSI controller or the SCSI device, is required to supply termination power. If neither device supplies the power, unusual behavior will result. For example, a CD-ROM drive may have many or no drivers mapped to it. You can use an Active Termination Device to fix this problem.

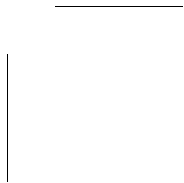
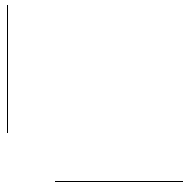
- Network Cards - Use the Windows NT Control Panel Network icon and make sure that all network components have been installed correctly. See Appendix B.
- Combo Cards - Be sure that the proper drivers for the Combo Card have been installed. Reboot the system and then do a hot insertion of the Combo Card. See Appendix B.

Suspend Notifications

If you attempt to suspend your system, you may receive a message suggesting a required course of action.

- Modem Cards - None - suspension will occur transparent to user.
- Network - You will not be able to suspend the system while there is a Network Card which does not support Hot-Swapping. As suspending would make the system unstable, you should shutdown your system to conserve power.
- SCSI Cards - You will not be able to suspend the system while there is a SCSI PC Card in use.
- Mass Storage Cards - You will not be able to suspend the system until you have closed all files and folders on Mass Storage (ATA, Flash, or SRAM) PC Cards.





...5

Formatting PC Cards

In this Chapter

- *Formatting ATA Hard Disk or ATA Flash Disk Cards* 5-2
 - Formatting an ATA PC Card from Windows NT* 5-2
 - Using the Start Button Icon*
 - Formatting an ATA PC Card from Windows NT* 5-4
 - Using My Computer Icon*
- *Formatting Memory (SRAM or Flash) PC Cards* 5-4

This chapter describes how to prepare and use removable Mass Storage Cards, such as ATA, Flash and SRAM PC Cards.

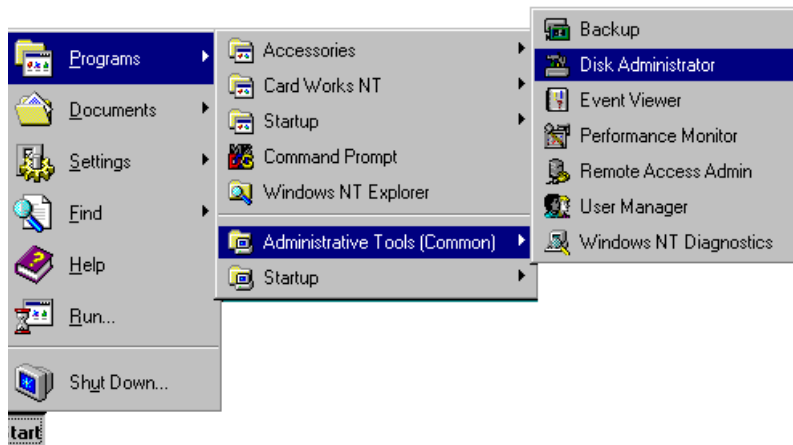
Formatting ATA Hard Disk or ATA Flash Disk Cards

You can use an ATA PC Card like most storage devices. You need to format your new ATA card like any hard disk.

You can format an ATA Card from Windows NT using either the Start Button icon or the My Computer icon. The following information describes each of these methods.

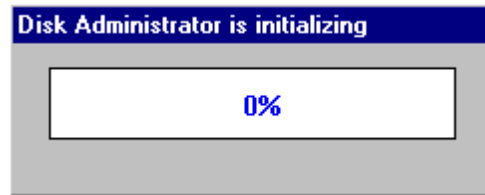
Formatting an ATA PC Card from Windows NT Using the Start Button Icon

- 1 Select **Programs > Administrative Tools > Disk Administrator** (see below)::

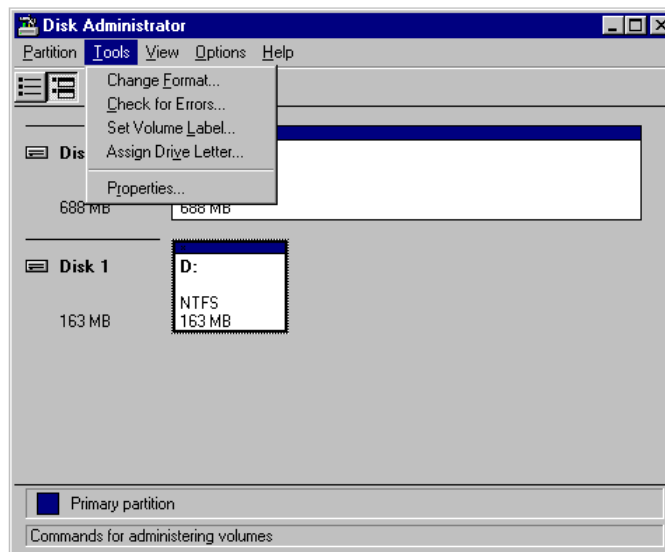


Formatting PC Cards

- 2 The Disk Administrator will initialize as shown in the following sample screen:



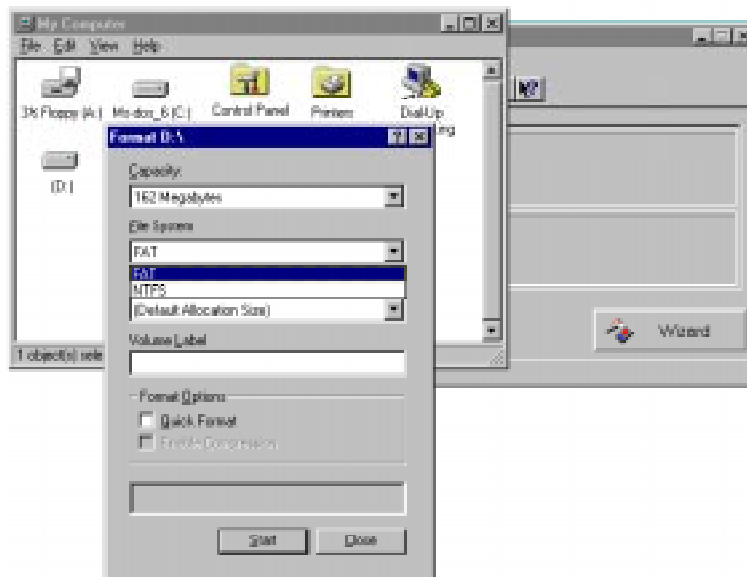
- 3 From the Disk Administrator Dialog box (see below) you can then Partition and either **Format** or **Change Format** (from the Tools menu) your ATA PC Card:



Once this format is complete, your ATA PC Card should be ready for use.

Formatting an ATA PC Card from Windows NT Using My Computer Icon

- 1 From My Computer, select the icon representing your Mass Storage PC Card.
- 2 From the File menu select **Format**. The Format dialog box displays:



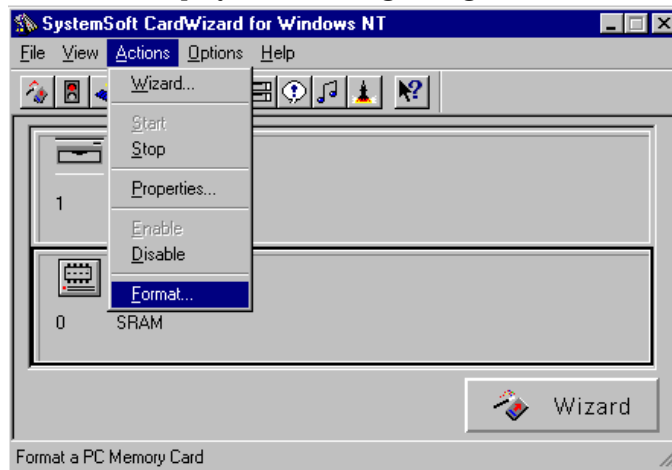
- 3 Make any desired changes to the fields in the Format dialog box. (Selecting Quick Format will shorten the time it takes to format your card.)
- 4 Click **Start** to begin formatting the card.

Formatting Memory (SRAM or Flash) PC Cards

A Memory PC Card can be used like most storage devices. You need to format your new SRAM or Flash PC Card like any hard disk.

Follow these steps to format a Memory PC Card using CardWizard:

- 1 Select **Format** from the Actions menu after pressing the right mouse button (you can also select the Format icon from the ToolBar) to display the following dialog box:

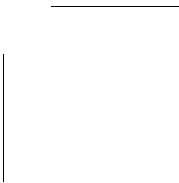
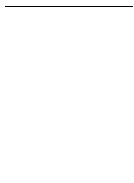
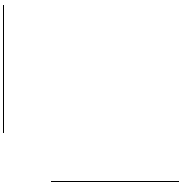


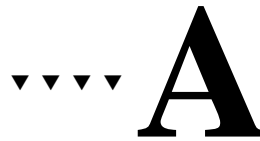
- 2 The following dialog box displays:



- 3 Make any desired changes to the fields in the Formatting SRAM Card dialog box.
- 4 Click **Start** to format the card.







Accelerator Keys

This appendix describes CardWizard for Windows NT shortcuts.

Table A-1 lists and describes the Accelerator keys for the CardWizard for Windows NT application. All Windows NT **defined** keys are also supported.

Table A-1. CardWizard for Windows NT Short Cuts

Accelerator	Menu Item	Action
Alt-F	File	Pop Up File Menu
X	Exit	Exit the Application
Alt-V	VIEW	Pop Up the View Menu
T	Tool Bar	Toggled ToolBar Display On/Off
S	Status Bar	Toggled Status Bar Display On/Off
Alt-A	ACTION	Pop Up the Action Menu
W	Wizard	Launch the Wizard
S	Stop	Stop the Card
Alt-O	Options	Pop Up the Option Menu
T	Setting	Submenu
U	User	User Settings
S	Slot	Slot Settings

Table A-1. CardWizard for Windows NT Short Cuts

Accelerator	Menu Item	Action
N	Notify	Notification Settings
B	Set Speaker Beep	Toggled Speaker On/Off
S	Sound	Sound File Settings
L	Launch	Launch Applications Settings
Alt-H	Help	Pop Up the Help Menu
C	Contents	Displays CardWizard Help Contents
U	Using Help	Displays Information on Using Windows NT Help
H	Help Topics	Display Help Topics
R	ReadMe	Displays the ReadMe File
A	About Dialog	Display Information on this Release of CardWizard for Windows NT





Network Card Configuration

The information in this appendix explains how to configure Network Cards for your PC.

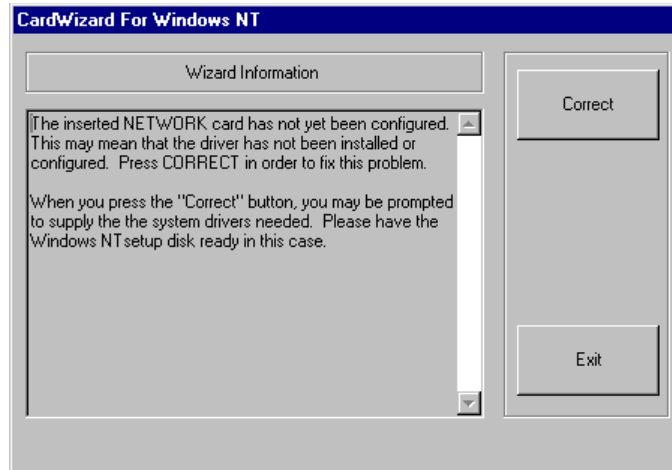
How to Configure Network Cards

Some Network Cards require the use of Memory windows. The location is specified during the network adapter setup. The address(es) specified must not overlap with the windows in use by other drivers. This can be determined by running NT Diagnostics and viewing the memory resources for the PC Card. If a Network Card is configured with a conflicting set of resources, the Wizard will notify you. Go to the Network Control panel applet to change the parameters for the driver.

Follow these steps to configure a Network PC Card.

CardWizard for Windows NT User' Guide

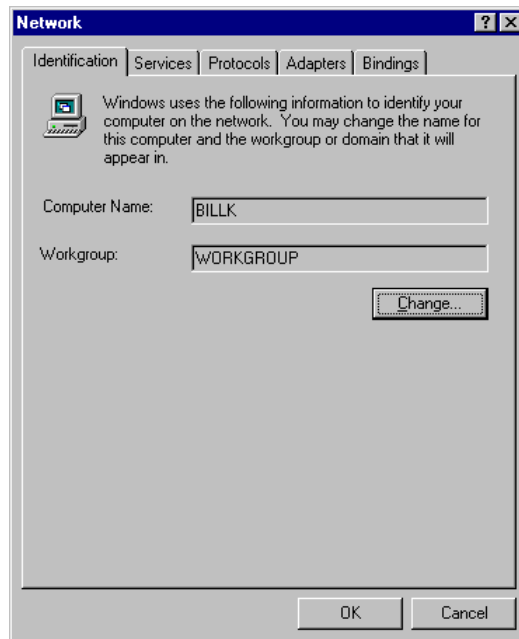
- 1 When you insert a Network Card which has not yet been configured, the following screen displays:



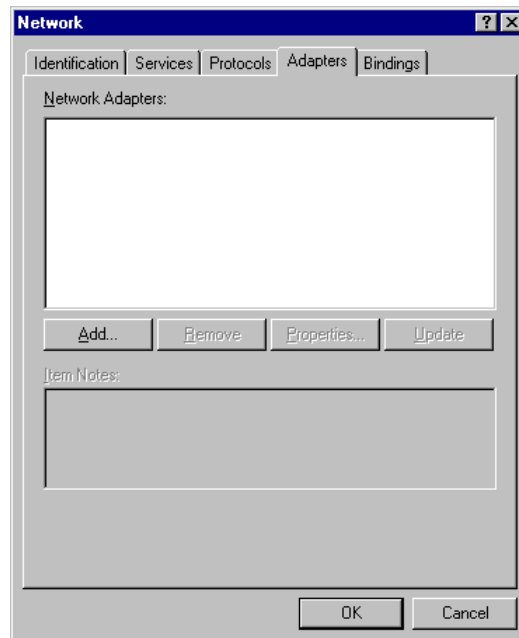
- 2 Press the **Correct** button.
- 3 If you have not yet installed Windows NT Networking follow the installation from the NT Network Setup Wizard and continue with Step 1 when you are required to copy additional files.

Network Card Configuration

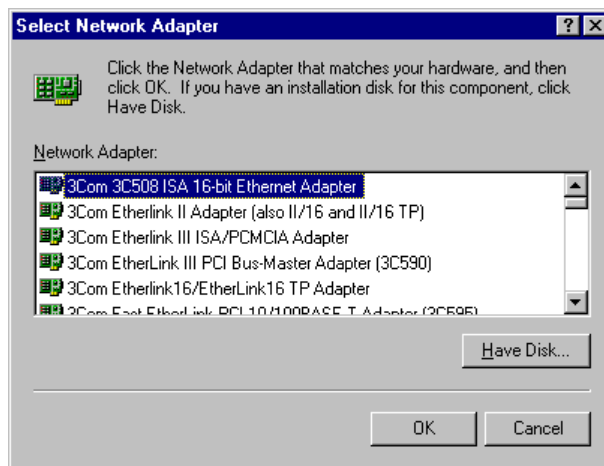
- 4 If you have previously setup a network, the Network Identification screen displays:



5 Select the **Adapter** tab.

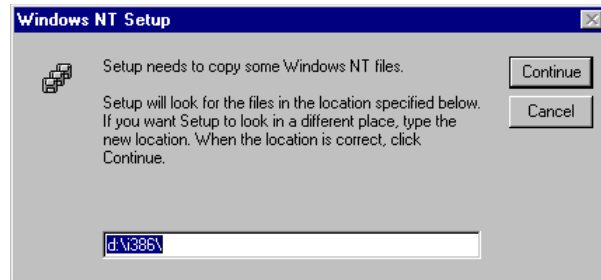


6 Select the **Add** button to view a listing of Adapters. Then either use the adapter driver on the diskette which was supplied with your PC Card, or select from a list of adapter drivers provided by Windows NT.

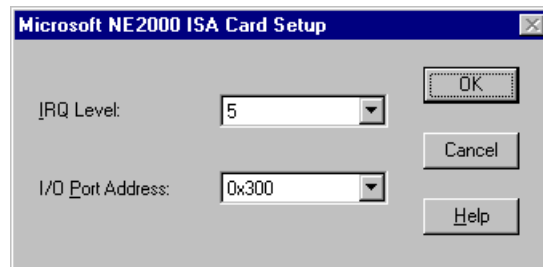


Network Card Configuration

- 7 If you are using the NT drivers, enter the path to these drivers from your Windows NT installation CD (or diskettes). The correct drivers will be copied to your hard drive.



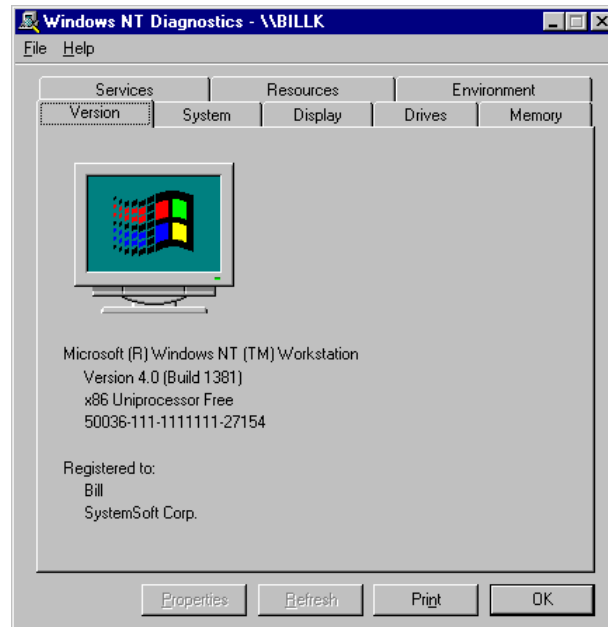
- 8 The Card Setup screen for your adapter displays on your PC. (See an example below.)



- 9 Confirm that both the IRQ Level and I/O Port Address do not conflict with those used by other devices. To prevent a conflict, select:

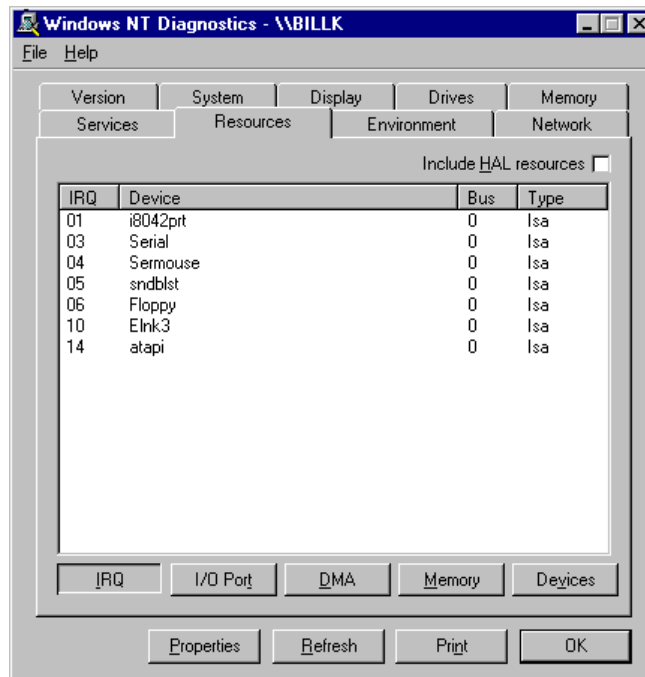
Start > Program > Administrative Tools (Common) > Windows NT Diagnostics

10 The windows NT Diagnostic screen displays:

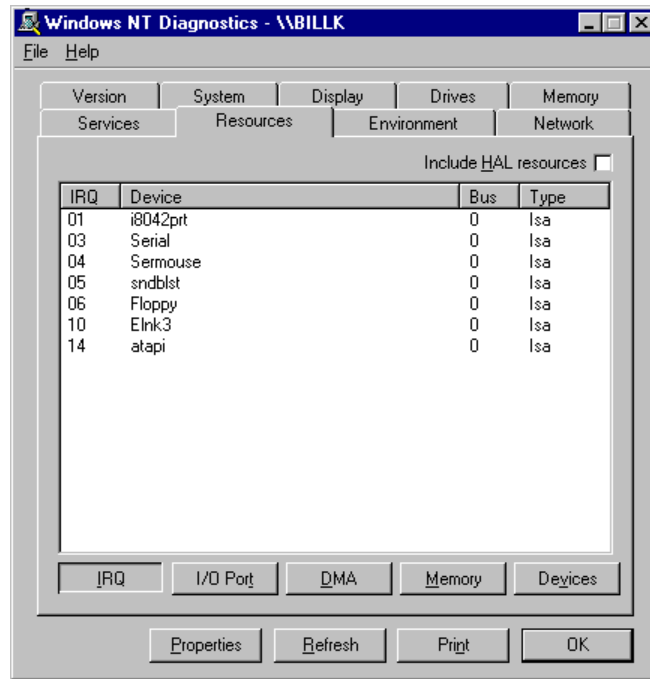


Network Card Configuration

- 11 Select the **Resources** button to view resource use. Then select the **IRQ** button on the bottom of the screen to view the PC Card I/O range used by Windows NT. Be sure that your Network Card is not using an IRQ used by another device.

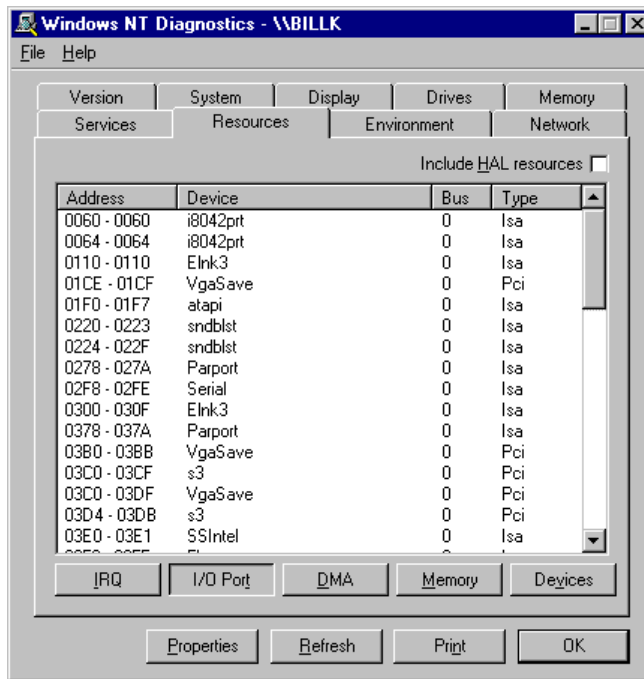


- 12 Select the **I/O Port** button on the bottom of the screen to view PC Card I/O range used by Windows NT (see below). Be sure that your Network Card is not using an I/O address used by another device.



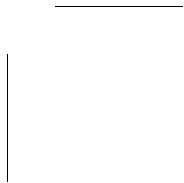
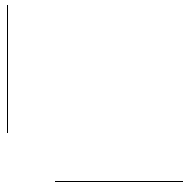
Network Card Configuration

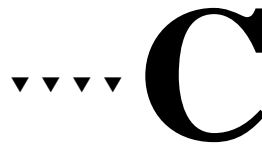
- 13 Select the **Memory** button on the bottom of the screen to view PC Card memory windows used by Windows NT (see below). Be sure that your memory address in the Card Setup screen does not conflict with any of the addresses listed in the screen.



- 14 If you need to provide an IP address for your Network Card. Follow the directions from the NT Network Setup Wizard to complete your installation.







Integrated Installation Procedure

The information in this appendix explains how to install CardWizard for Windows NT and PowerProfiler for Windows NT together.

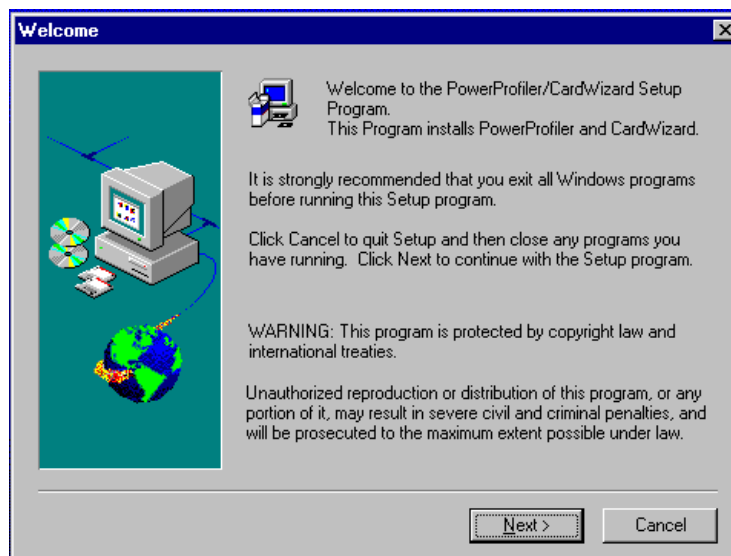
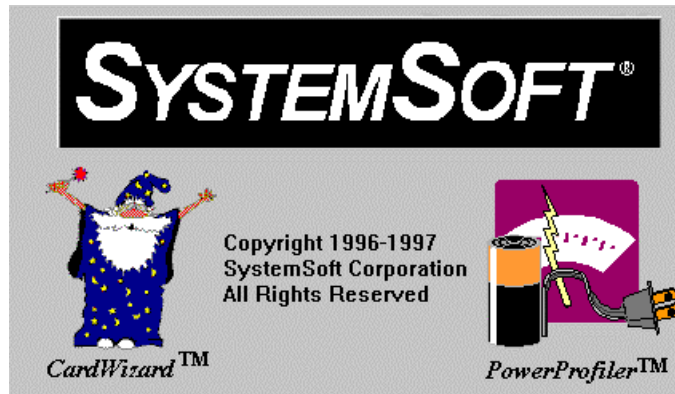
How to Install CardWizard for Windows NT and PowerProfiler for Windows NT

Installing both CardWizard for Windows NT and PowerProfiler for Windows NT together is a simple task. Just insert the installation diskette into the appropriate drive and follow the prompts on the screen. If you do need assistance, refer to the instructions below.

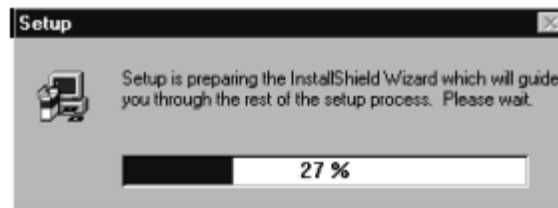
- 1 If your system is connected to a network, log off before starting installation.
- 2 Logon as an Administrator.
- 3 Remove all PC Cards from the system.
- 4 Insert diskette #1 in the drive.
- 5 Read the ReadMe file on the installation diskette.
- 6 Select **Run** from the Windows NT Start button.
- 7 Enter a:setup on the Open line in the Run dialog box.
- 8 Select **OK**.

CardWizard for Windows NT User' Guide

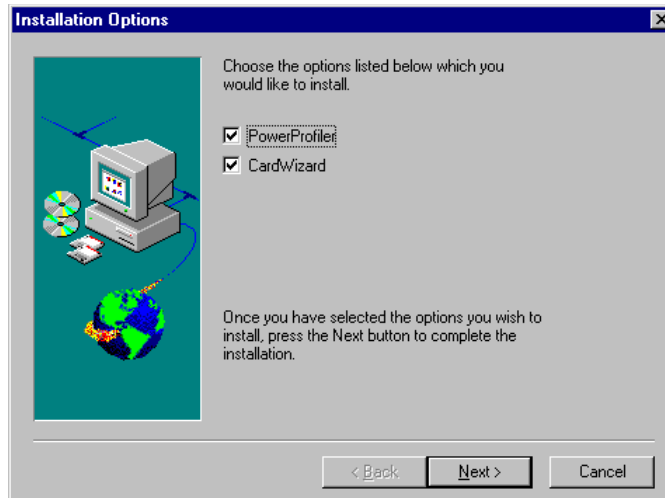
- 9 The installation program starts and indicates that Setup is preparing for the installation. You will then be guided through the installation process.
- 10 The initial Title screen displays, followed by the Welcome and Setup screens (see the following three sample screens).



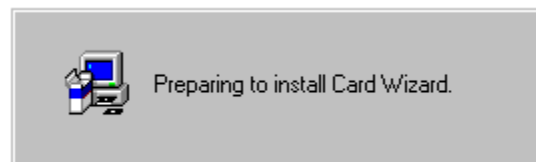
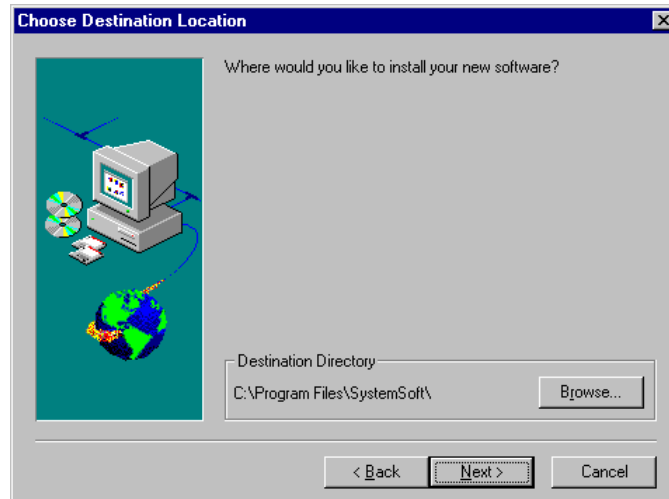
Integrated Installation Procedure



- 11 Select PowerProfiler and/or CardWizard to install one or both products.



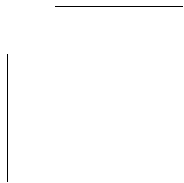
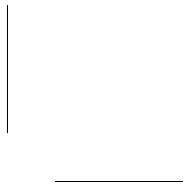
- 12 Select the location in which you will install your SystemSoft product(s). Both PowerProfiler and CardWizard will be placed in subdirectories in the destination location.



- 13 The Setup program will continue by running the individual Setup programs for CardWizard and/or PowerProfiler depending upon the programs being installed. You will be prompted when to insert a new installation diskette. (Refer to Chapter 2 of this user's guide for CardWizard and Chapter 2 of the PowerProfiler User Guide for specifics on the installation sequence for each of these products.) Note that some screens which appear in the individual installation sequence may not appear in this integrated installation.

The System will then prompt you to reboot. Be sure to remove the installation diskette before rebooting the system.







Adaptec, Inc.
691 South Milpitas Boulevard
Milpitas, CA 95035

© 1998 Adaptec, Inc.
All rights reserved. Adaptec, and the Adaptec logo
are trademarks of Adaptec, Inc. which may be regis-
tered in some jurisdictions.

Printed in Singapore
STOCK NO.: 512192-00 Rev. A MPO 11/98